

```
=> s parvovirus
L1          114 PARVOVIRUS

=> s human
L2          114282 HUMANS 11(P)L2

=>
L3          26 L1(P)L2

=> S B(W)19 OR B19
      899362 B
      847981 19
```

997 B(W)19
355 B19
L4 1341 B(W)19 OR B19

=> S L1 AND L4
L5 4 L1 AND L4

=> S L3 OR L5
L6 26 L3 OR L5

=> T L6,CIT,AB,1-26

1. 5,354,678, Oct. 11, 1994, Production of recombinant adeno-associated virus vectors; Jane S. Lebkowski, et al., 435/172.3, 235.1, 240.2, 320.1; 935/32, 70, 71 [IMAGE AVAILABLE]

US PAT NO: 5,354,678 [IMAGE AVAILABLE] L6: 1 of 26

ABSTRACT:

Simplified methods to produce recombinant adeno-associated virus (rAAV) vectors are described. The methods involve the use of chimeric plasmids which incorporate the Epstein Barr nuclear antigen (EBNA) gene, the latent origin of replication of Epstein Barr virus (oriP), and a rAAV genome. The chimeric plasmids themselves are also a part of the present invention. These plasmids are maintained as multicopy extra-chromosomal elements in cells, such as human 293 cells. Permanent cell lines carrying these EBV/AAV plasmids are induced to produce large amounts of rAAV upon addition of wild-type, adeno-associated virus helper functions. Vectors produced in this manner are capable of transducing exogenous genes into other human cell lines and exhibit the attributes of vital elements produced by conventional methods.

2. 5,344,838, Sep. 6, 1994, Sterilant composition; Stanley L. Wachman, et al., 514/358, 247, 255, 256, 259, 307, 311, 334, 356, 359, 400, 406, 423, 448, 461, 567, 642, 643 [IMAGE AVAILABLE]

US PAT NO: 5,344,838 [IMAGE AVAILABLE] L6: 2 of 26

ABSTRACT:

A biocidal, aqueous composition for killing bacteria, spores, fungi, and viruses on nonabsorbent surfaces comprises at least one quaternary ammonium compound, at least one aliphatic dialdehyde having from two to six carbon atoms, and at least one aliphatic hydroxyl compound having from one to eight carbon atoms. This sterilant is stable for weeks, is especially useful between pH 4 to 9, and may additionally comprise a chelating agent.

3. 5,338,748, Aug. 16, 1994, Sterilant composition; Stanley L. Wachman, et al., 514/358, 259, 307, 311, 334, 356, 567, 642, 643, 705 [IMAGE AVAILABLE]

US PAT NO: 5,338,748 [IMAGE AVAILABLE] L6: 3 of 26

ABSTRACT:

A biocidal, aqueous composition for killing bacteria, spores, fungi, and viruses on nonabsorbent surfaces comprises at least one quaternary ammonium compound, at least one aliphatic dialdehyde having from two to six carbon atoms, and at least one aliphatic hydroxyl compound having from one to eight carbon atoms. This sterilant is stable for weeks, is especially useful between pH 4 to 9, and may additionally comprise a chelating agent.

4. 5,283,331, Feb. 1, 1994, 2-halogeno-oxetanocin A and phosphoric ester thereof; Seiichi Saito, et al., 544/229, 244, 277 [IMAGE AVAILABLE]

US PAT NO: 5,283,331 [IMAGE AVAILABLE] L6: 4 of 26

ABSTRACT:

It was found that 2-halogeno-oxetanocin A and 4'-phosphate thereof represented by the following general formula (1): ##STR1## wherein X represents a halogen atom and R represents a hydrogen atom or a phosphoric acid residue ##STR2## or salts thereof exhibit a strong antiviral activity and are useful as an active ingredient of therapeutic drug for viral diseases. Further, it was also found that the compounds of this invention are characterized in that they are not inactivated by adenosine deaminase widely present in living bodies and exhibit a high residual activity.

5. 5,254,572, Oct. 19, 1993, Method and composition for supplementing vitamin B6 where the PN-PLP pathway is disturbed; Willem J. Serfontein,

514/345, 351 [IMAGE AVAILABLE]

US PAT NO: 5,254,572 [IMAGE AVAILABLE]

L6: 5 of 26

ABSTRACT:

Treatment or prophylaxis of depressed or inadequate intracellular pyridoxal phosphate levels in a human or animal patient resulting from a condition, wherein the pyridoxihe (PN)--pyridoxal phosphate (PLP) pathway is disturbed or insufficient, either by chemical factors as occur in physiological shock myocardial, infarction, release of polyamines or toxins by cell death or microbes, vitamin B6 antagonistic drugs; or by enzymatic insufficiencies inherent in the cells of a patient caused by genetic lack of oxidase or genetic oxidase polymorphism; cellular immaturity of premature infants; in conditions involving anemia, destruction of erythrocytes (e.g. malaria, biliary fever). The deficiencies are counteracted by the administration of pyridoxal or a precursor of pyridoxal which in vivo, once it has entered the bloodstream, is rapidly converted into pyridoxal without the intervention of oxidase or oxygen, optionally and preferably without the intervention of kinase.

6. 5,252,479, Oct. 12, 1993, Safe vector for gene therapy; Arun Srivastava, 435/235.1, 240.2, 320.1 [IMAGE AVAILABLE]

US PAT NO: 5,252,479 [IMAGE AVAILABLE]

L6: 6 of 26

ABSTRACT:

Gene therapy involves the transfer and stable insertion of new genetic information into cells. The present invention is directed to safe vectors for gene therapy and thus provides hybrid **parvovirus** vectors which are capable of site-specific integration into a mammalian chromosome without substantial cytotoxicity, and which direct erythroid cell-specific expression of heterologous genes. The hybrid vector is useful in gene therapy, particularly in the treatment of hemoglobinopathies and other hematopoietic diseases. A method of delivery of constitutive levels of a pharmaceutical product and a method of producing a recombinant protein are also provided.

7. 5,252,348, Oct. 12, 1993, Artificial viral envelopes; Hans Schreier, et al., 424/450; 264/4.1; 424/196.11, 208.1, 211.1, 812; 436/829 [IMAGE AVAILABLE]

US PAT NO: 5,252,348 [IMAGE AVAILABLE]

L6: 7 of 26

ABSTRACT:

The production of artificial viral envelopes by a novel double-detergent dialysis technique is disclosed. Specifically exemplified is the production of HIV-1 and RSV viral envelopes. The resulting artificial viral envelopes are essentially identical to the natural virus with regard to characteristics which are relevant to immunogenicity.

8. 5,232,844, Aug. 3, 1993, Photodynamic inactivation of viruses in cell-containing compositions; Bernard Horowitz, et al., 435/173.1; 424/93.71, 93.72, 93.73, 529, 533; 435/2, 173.3, 236 [IMAGE AVAILABLE]

US PAT NO: 5,232,844 [IMAGE AVAILABLE]

L6: 8 of 26

ABSTRACT:

The present invention concerns the product produced by inactivating extracellular lipid enveloped pathogenic virus or intracellular pathogenic virus in a composition containing $>1 \times 10^9$ cells/ml and said virus without incurring substantial disruption or inactivation of such cells, the inactivation process comprising contacting the composition with a virucidally effective amount of at least one photoreactive compound having an absorption maximum of ≥ 630 nm, light and an oxidizer, thereby substantially to inactivate the virus with retention of cell functionality, greater than 80%. The present invention also concerns the product produced by inactivating virus in a biological composition without incurring substantial disruption or inactivation thereof, the inactivation process comprising contacting said composition with a virucidally effective amount of at least one photoreactive compound, light, and a quencher thereby to inactivate said virus while retaining functionality of said substance.

9. 5,214,048, May 25, 1993, Oxetanocins; Nobuyoshi Shimada, et al., 514/262; 435/88; 514/265, 266; 544/264, 265, 276, 277 [IMAGE AVAILABLE]

US PAT NO: 5,214,048 [IMAGE AVAILABLE]

L6: 9 of 26

ABSTRACT:

This invention relates to novel oxetanocins represented by the following

general formula (I): ##STR1## wherein R represents a group represented by ##STR2## and their pharmacologically acceptable salts which have antiviral activities.

10. 5,173,414, Dec. 22, 1992, Production of recombinant adeno-associated virus vectors; Jane S. Lebkowski, et al., 435/172.3, 320.1; 935/27, 32, 56, 57 [IMAGE AVAILABLE]

US PAT NO: 5,173,414 [IMAGE AVAILABLE]

L6: 10 of 26

ABSTRACT:

A simplified method to produce recombinant adeno-associated virus (AAV) vectors is described. The procedure involves the use of chimeric plasmids which incorporate the Epstein Barr nuclear antigen (EBNA) gene, the latent origin of replication of Epstein Barr Virus (oriP), and a recombinant AAV genome. The chimeric plasmids themselves are also a part of the present invention. These EBV/AAV plasmids are maintained as multicopy extra-chromosomal elements in cells, such as human 293 cells. Permanent cell lines carrying these EBV/AAV plasmids are induced to produce large amounts of recombinant AAV virus upon addition of wild-type, adeno-associated virus helper functions. Recombinant AAV vectors produced in this manner are capable of transducing exogenous genes into other human cell lines and exhibit all of the attributes of viral elements produced by conventional methods.

11. 5,139,941, Aug. 18, 1992, AAV transduction vectors; Nicholas Muzyczka, et al., 435/172.3, 320.1; 935/32, 57 [IMAGE AVAILABLE]

US PAT NO: 5,139,941 [IMAGE AVAILABLE]

L6: 11 of 26

ABSTRACT:

A hybrid gene vector suitable for introducing foreign DNA into a mammalian cell comprising the foreign DNA ligated to an AAV genome; a method of constructing the hybrid gene vector; a method of transducing foreign DNA into mammalian cells comprising infecting the cells with the above hybrid gene vector and a method of rescuing foreign DNA from mammalian cells utilizing helper virus.

12. 5,124,359, Jun. 23, 1992, Sterilant composition; Stanley L. Wachman, et al., 514/642, 643, 705 [IMAGE AVAILABLE]

US PAT NO: 5,124,359 [IMAGE AVAILABLE]

L6: 12 of 26

ABSTRACT:

A biocidal, aqueous composition for killing bacteria, spores, fungi, and viruses on nonabsorbent surfaces comprises at least one quaternary ammonium compound, at least one aliphatic dialdehyde having from two to six carbon atoms, and at least one aliphatic hydroxyl compound having from one to eight carbon atoms.

This sterilant is stable for weeks, is especially useful between pH 4 to 9, and may additionally comprise a chelating agent.

13. 5,118,794, Jun. 2, 1992, Process for stabilizing human albumin solutions and the solution obtained; Michel Grangeorge, et al., 530/363, 362, 364 [IMAGE AVAILABLE]

US PAT NO: 5,118,794 [IMAGE AVAILABLE]

L6: 13 of 26

ABSTRACT:

In order to stabilize solutions of human albumin for therapeutic use for the purpose of their treatment by heat in a container, in particular in the final container, there is added, in addition to the usual stabilizing formula, a surfactant agent selected from among Tween 80, Tween 20, Pluronic F68, laurate of polyethylene glycol 600 or any other equivalent agent.

14. 5,106,619, Apr. 21, 1992, Preparation of inactivated viral vaccines; Gary P. Wieseahn, et al., 424/208.1, 204.1, 209.1, 211.1, 215.1, 216.1, 218.1, 221.1, 224.1, 229.1, 232.1, 233.1; 435/236, 238; 546/270 [IMAGE AVAILABLE]

US PAT NO: 5,106,619 [IMAGE AVAILABLE]

L6: 14 of 26

ABSTRACT:

Vaccines employing inactivated viruses having improved retention of antigenic characteristics are prepared by psoralen-inactivation of the live virus in a non-oxidizing atmosphere. By excluding oxygen and other oxidizing species from the inactivation medium, degradation of the antigen characteristics resulting from irradiation with ultraviolet light is largely prevented. The resulting inactivated viruses are employed in vaccine preparations for the inoculation of susceptible hosts to inhibit

viral infection.

15. 5,106,616, Apr. 21, 1992, Administration of acemannan; Bill H. McAnalley, et al., 424/85.2; 514/54, 885 [IMAGE AVAILABLE]

US PAT NO: 5,106,616 [IMAGE AVAILABLE] L6: 15 of 26

ABSTRACT:

Acemannan has now been discovered to be a potent inducer of Interleukin 1 (IL-1) and prostaglandin E.sub.2 (PGE.sub.2) production by human peripheral blood adherent cells in culture. IL-1 has been shown to be an important macrophage product and is associated with influencing the activity and production of T lymphocytes, fibroblasts, B lymphocytes and endothelial cells. Acemannan has no demonstrated toxicity, and acts as an adjuvant and immunoenhancer. Administration of an amount of acemannan sufficient to stimulate monocytes and macrophages not only produces IL-1 and PGE.sub.2 but also stimulates phagocytosis, increases antibody production, enhances antiviral activity in the serum and, in those patients with AIDS/ARC, produces defective HIV virus. Acemannan has been shown to affect the rate of virus production in viral vaccine master seed cultures by accelerating the rate of viral replication. In addition, acemannan is a potent adjuvant to viral vaccines in chickens. Acemannan has also shown specific antitumor activity against sarcoid tumors in horses.

16. 5,100,664, Mar. 31, 1992, Human IL-2 as a vaccine adjuvant; Michael V. Doyle, et al., 424/85.2, 256.1, 278.1; 514/885; 530/351 [IMAGE AVAILABLE]

US PAT NO: 5,100,664 [IMAGE AVAILABLE] L6: 16 of 26

ABSTRACT:

Methods for enhancing the immune response to vaccination in animals, including humans, comprise administering interleukin-2 (IL-2) as part of the vaccination regimen, preferably for 5 to 14 days post-vaccination. In addition, compositions for enhancing the immune response of an animal to a vaccine employ IL-2 as an active ingredient, preferably human IL-2.

17. 5,077,192, Dec. 31, 1991, Method of detecting antigenic, nucleic acid-containing macromolecular entities; Tsanyang Liang, et al., 435/5, 6, 7.1, 7.2 [IMAGE AVAILABLE]

US PAT NO: 5,077,192 [IMAGE AVAILABLE] L6: 17 of 26

ABSTRACT:

A method for the detection of nucleic acid-containing moieties is described which combines affinity capture of the moiety with detection and identification of the moiety's nucleic acid.

18. 5,041,447, Aug. 20, 1991, Oxetanocin-related compounds and pharmaceutical compositions containing them; Seiichi Saito, et al., 514/262, 265, 266; 544/265, 267, 276, 277 [IMAGE AVAILABLE]

US PAT NO: 5,041,447 [IMAGE AVAILABLE] L6: 18 of 26

ABSTRACT:

This invention relates to oxetanocin-related compounds represented by the following formula (I): ##STR1## [in formula (I), R.sub.1, Y and B have the following meanings: (a) R.sub.1 represents --CH.sub.2 OH or --CH.sub.2 OCO-(alkyl), (b) Y represents ##STR2## provided that R.sub.2 is --H, --OH or --CH.sub.2 OH and R.sub.3 is --H, --OH, halogen atom, --CH.sub.2 OH, lower alkyl group, --CH.sub.2 -N.sub.3, --CH.sub.2 -F, --N.sub.3, --COOH, --NH.sub.2, --CH.sub.2 OSO.sub.3 H or --CH.sub.2 OCO-(lower alkyl), and (c) B represents a residue of purine base, (d) provided that R.sub.1 and R.sub.3 cannot simultaneously represents --CH.sub.2 OH] and their salts which have activities such as an antiviral activity and the like and are expectedly useful as a pharmaceutical and the like.

19. 5,019,382, May 28, 1991, Treatment of immuno-resistant disease with low-dose interferon; Joseph M. Cummins, Jr., 424/85.4, 85.6, 85.7 [IMAGE AVAILABLE]

US PAT NO: 5,019,382 [IMAGE AVAILABLE] L6: 19 of 26

ABSTRACT:

Neoplastic disease, hyperallergenicity, autoimmune disorders characterized by chronic tissue degenerative inflammation and immuno-resistant viral infections are treated by the administration of

interferon at a dosage of about 0.1 to about 5 IU/lb per day by contacting said interferon with oral/pharyngeal mucosa. Interferon is administered in solution or in a novel solid unitary dosage form adapted to be dissolved in saliva when placed in the mouth.

20. 4,978,622, Dec. 18, 1990, Cytophaga-derived immunopotentiator; Robert Mishell, et al., 424/282.1; 435/267, 270, 274; 514/54; 536/123, 123.1 [IMAGE AVAILABLE]

US PAT NO: 4,978,622 [IMAGE AVAILABLE]

L6: 20 of 26

ABSTRACT:

Substantially pigment-free gliding bacteria adjuvant (GBA) is isolated from medium in which Cytophaga strain GB-2 has been cultured by extraction with acetone to remove pigment, enzymatic digestion and filtration to remove residual protein and nucleic acids, and affinity chromatography to remove residual lipopolysaccharide. This pure form of GBA shows unexpectedly high specific immunopotentiating activity relative to crude GBA.

21. 4,883,662, Nov. 28, 1989, Method of increasing natural killer cell population of cancer patients; Robert L. Stout, 424/531, 85.2, 281.1 [IMAGE AVAILABLE]

US PAT NO: 4,883,662 [IMAGE AVAILABLE]

L6: 21 of 26

ABSTRACT:

An in vivo method is described for increasing the population of Natural Killer (NK) cells in the blood of patients suffering from cancer, such NK cells having known activity against tumor cells. The method broadly involves injecting a specially prepared biologic into the patient's bloodstream and allowing the biologic to activate the patient's immune system so as to achieve a desired NK cell population increase (preferably at least a twofold increase). The biologic is produced by injecting an animal such as a goat with a virus (preferably a normally immunosuppressive Parvovirus) and allowed to react to the virus for a period of time to generate the biologic in its blood serum; blood is then withdrawn from the animal and the serum fraction thereof, containing the desired biologic, can be used in fractionated or more highly purified form.

22. 4,797,368, Jan. 10, 1989, Adeno-associated virus as eukaryotic expression vector; Barrie J. Carter, et al., 435/320.1, 91.41, 91.42, 172.3, 317.1; 935/22, 34, 57 [IMAGE AVAILABLE]

US PAT NO: 4,797,368 [IMAGE AVAILABLE]

L6: 22 of 26

ABSTRACT:

The present invention relates to a vector comprising part of AAV DNA contained in a plasmid and capable of being packaged into AAV particles and functioning as a vector for stable integration and expression of a gene in eukaryotic cells when under control of an AAV transcription promoter. A method of preparing such plasmids which are packagable and rescuable is also described.

23. 4,693,981, Sep. 15, 1987, Preparation of inactivated viral vaccines; Gary P. Wieseahn, et al., 435/238; 424/204.1, 215.1, 224.1, 229.1 [IMAGE AVAILABLE]

US PAT NO: 4,693,981 [IMAGE AVAILABLE]

L6: 23 of 26

ABSTRACT:

Vaccines employing inactivated viruses having improved retention of antigenic characteristics are prepared by psoralen-inactivation of the live virus in a non-oxidizing atmosphere. By excluding oxygen and other oxidizing species from the inactivation medium, degradation of the antigen characteristics resulting from irradiation with ultraviolet light is largely prevented. The resulting inactivated viruses are employed in vaccine preparations for the inoculation of susceptible hosts to inhibit viral infection.

24. 4,687,732, Aug. 18, 1987, Visualization polymers and their application to diagnostic medicine; David C. Ward, et al., 435/6, 7.4, 7.5, 7.72, 7.9, 14, 21, 25, 28, 188, 810, 968, 975; 436/501, 504, 537, 545, 546, 800, 801, 804, 808, 827; 536/24.3, 25.32 [IMAGE AVAILABLE]

US PAT NO: 4,687,732 [IMAGE AVAILABLE]

L6: 24 of 26

ABSTRACT:

A method for detecting a minute quantity of an inorganic or organic

target molecule by combining it with a composition of a detecting agent for the target molecule which carries, by direct or indirect means, a visualization polymer. The visualization polymer is composed of multiple units of a visualization monomer which are covalently linked together directly or indirectly covalently linked together by coupling agents which bond to chemical groups of the monomer. The monomer may be an enzyme, a tagged polypeptide, a tagged polyol, a tagged polyolefin or a tagged carbohydrate. The detecting agent may be an antibody, an enzyme, a lectin, strand of a DNA receptor protein, avidin, streptavidin and the like. The visualization polymer produces a high degree of amplification for the detection of the target molecule.

25. 4,687,665, Aug. 18, 1987, Biologic and method of preparing same;
Robert L. Stout, 424/85.1, 233.1 [IMAGE AVAILABLE]

US PAT NO: 4,687,665 [IMAGE AVAILABLE]

L6: 25 of 26

ABSTRACT:

A method is described for the production of large quantities of biologic which serves as an immunomodulator and also to decrease the concentration of serum cholesterol and triglycerides. In practice, an animal such as a goat is injected with a virus (preferably a normally immunosuppressive Parvovirus) and allowed to react to the virus for a period of time to generate the biologic in its blood serum; blood is then withdrawn from the animal and the serum fraction thereof, containing the desired biologic, can be used in fractionated or more highly purified form. Examples are also provided of use of the biologic as an immunostimulant and for reducing serum cholesterol and triglycerides.

26. 4,572,834, Feb. 25, 1986, Biologic and method of preparing same;
Robert L. Stout, 424/85.1, 85.2, 233.1; 530/351 [IMAGE AVAILABLE]

US PAT NO: 4,572,834 [IMAGE AVAILABLE]

L6: 26 of 26

ABSTRACT:

A method is described for the production of large quantities of biologic which serves as an immunomodulator and also to decrease the concentration of serum cholesterol and triglycerides. In practice, an animal such as a goat is injected with a virus (preferably a normally immunosuppressive Parvovirus) and allowed to react to the virus for a period of time to generate the biologic in its blood serum; blood is then withdrawn from the animal and the serum fraction thereof, containing the desired biologic, can be used in fractionated or more highly purified form. Examples are also provided of use of the biologic as an immunostimulant and for reducing serum cholesterol and triglycerides.

=> LOG Y

U.S. Patent & Trademark Office LOGOFF AT 15:27:36 ON 13 OCT 94